



PUBLISHED BY THE NEW YORK ACADEMY OF SCIENCES



*The New York Academy of Sciences*  
**May 25-28, 1994**

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**Functional Diversity of  
Interacting Receptors**

**Conference Chairs:**

**Abel Lajtha, Ph.D.**  
Center for Neurochemistry  
Nathan S. Kline Institute  
Orangeburg, New York

**Leo Aboud, Ph.D.**  
Department of Pharmacology  
University of Rochester  
School of Medicine and Dentistry  
Rochester, New York

**Location:**

**Hyatt Regency Washington on Capitol Hill**  
**400 New Jersey Avenue, NW**  
**Washington, D.C. 20001**  
**Telephone (202) 737-1234**  
**Hotel Fax (202) 737-5773**

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**See back of program for registration and hotel reservation forms.**

## THE NEW YORK ACADEMY OF SCIENCES

The New York Academy of Sciences is an independent, not-for-profit scientific and educational organization committed both to advancing science and engineering and to applying science and technology for the public good. In its structure, the Academy is a membership organization with membership openly available to scientists, engineers, physicians, and educators, as well as to interested members of the public.

The Academy carries out its dual commitments to science and society through leadership in both developing ideas and implementing programs of action. In service to science, the Academy promotes and facilitates the exchange of information among scientists in the greater New York area and around the world. In service to society, it engages in public communication, policy analysis and debate, and science education to illuminate and improve the quality, timeliness, and reliability of contributions of science to social and economic progress.

The Academy has nearly 40,000 members in 137 countries.

## ACADEMY CONFERENCES

The New York Academy of Sciences, now in its 177th year, has been at the forefront in encouraging the interactions of scientists and engineers by sponsoring conferences, workshops, and lectures. Our reputation for producing comprehensive conferences of quality is unsurpassed.

The Academy sponsors approximately twenty international meetings each year in New York and in cities all over the world. Typically, a conference will consist of an interdisciplinary examination of a single topic, have twenty to thirty speakers, include poster sessions, have a duration of three days, an attendance of 250, and produce an *Annal* within eight months of the conference.

## ANNALS

The *Annals*, celebrating their 170th anniversary, are the major scientific publications of the Academy and comprise the proceedings of the conferences and workshops held by the Academy, as well as those of other selected scientific meetings. Containing up-to-date studies and research findings, these volumes are disseminated to more than 700 libraries of scientific, medical, and educational institutions worldwide, and are made available to Academy members, other professionals, and students. About thirty volumes of the *Annals* are published each year. For a current catalog and purchasing information, please contact the Academy at 212-838-0230, extension 341.

### **CONFERENCE THEME**

The intent of this meeting is to contribute to a better understanding of the functional significance of neuronal receptor diversity, by addressing such topics as the genetic regulation of receptor subtypes; the functional characteristics of neurons with subtypes; second-messenger and ion-channel diversity; species and regional differences in receptor subtypes; changes occurring with age and pathologic state; and changes in receptor structure and gene expression associated with prolonged exposure to agonists and antagonists.

### **CONFERENCE CONTRIBUTIONS**

#### **MAJOR FUNDING PROVIDED BY**

The Council for Tobacco Research-U.S.A., Inc.

#### **CONTRIBUTORS**

Abbott Laboratories  
American Cyanamid Company  
Fisons Pharmaceuticals  
The R. W. Johnson Pharmaceutical Research Institute  
The Upjohn Company

Contributions received after the printing of this program will be acknowledged in the Abstract Booklet distributed at the conference and in the Annual resulting from the conference.

### **ACCME CREDIT**

The New York Academy of Sciences is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to sponsor continuing medical education for physicians.

The New York Academy of Sciences designates this continuing medical education activity for **23** credit hours in Category I of the Physician's Recognition Award of the American Medical Association.

### **CALL FOR POSTER ABSTRACTS**

There will be contributed poster sessions held in conjunction with this conference. The deadline for submission of poster abstracts has been **etended** to **March 25, 1994**. The entire abstract, including title, author(s), and affiliations, must be typed single-spaced and contained within a rectangle that measures 5" across and 4 and  $\frac{3}{8}$ " down. (Abstract form is not necessary). A cover letter should also accompany the abstract, indicating the complete mailing address of the first author.

**Please send original abstracts to:**

**Abel Lajtha, Ph.D.**  
Center for Neurochemistry  
Nathan S. Kline Institute  
140 Old Orangeburg Road  
Orangeburg, New York 10962-2210  
Fax (914) 365-6107

**and to:**

**Geraldine Busacco**  
Conference Director  
The New York Academy of Sciences  
2 East 63rd Street  
New York, New York 10021  
Fax (212) 838-5640

## CONFERENCE SITE

The Hyatt Regency Washington is ideally located on Capitol Hill, two blocks from the U.S. Capitol, the Supreme Court, the Library of Congress and Capitol Hill's historic homes, restaurants and boutiques. The hotel is within walking distance of the National Air and Space Museum, the National Gallery of Art and many other free museums and monuments on the Mall. The Mall, Smithsonian Museums and Lincoln, Washington, Jefferson and Vietnam Veterans memorials are only minutes away.

## GROUND TRANSPORTATION INFORMATION

### Travel distance to the Hyatt Regency Washington

Metro Subway, Union Station:	3 blocks
Amtrak, Union Station:	3 blocks
Washington National Airport:	15 minutes
Washington-Dulles International Airport:	45 minutes
Baltimore-Washington International Airport:	45 minutes

### From Washington National Airport

Taxi fare is approximately \$10.00. The hotel is also accessible via the Metro Subway System. Take the Blue-Addison Road Line to the Metro Center Stop, then transfer for the Red-Wheaton Line to the Union Station Stop.

### From Washington-Dulles International Airport

Taxi fare is approximately \$37.00. Washington Flyer van service is approximately \$12.00 one way, \$20.00 round trip. Service operates every half hour. Washington Flyer ticket counters are located in the baggage claim area.

### From Baltimore-Washington International Airport (BWI)

Taxi fare is approximately \$40.00 (agree on price with driver before leaving BWI). Washington Flyer van service is approximately \$15.00 one way, \$25.00 round trip. Washington Flyer ticket counters are located in the baggage claim area. BWI is also an Amtrak rail stop, in service Monday through Friday only. The fare is approximately \$10.00. For train schedules call (800) USA-RAIL or (202) 484-7540.

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## Wednesday May 25, 1994

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**6:30 PM-8:30 PM**

**Registration**

*Regency Foyer-Ballroom Level*

**6:30 PM-8:30 PM**

**Welcome Wine and Cheese  
Reception**

*Ticonderoga-Ballroom Level*

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## Thursday May 26, 1994

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All *Scientific Sessions* will be held in the Regency Ballroom located on the Ballroom Level. Posters will be on display in the Regency Foyer.

**7:30 AM-6:00 PM**

**Registration**

*Regency Foyer-Ballroom Level*

**8:45 AM-9:00 AM**

**Welcome Remarks**

*Eric J. Simon, Ph.D.*

*Member, Conference Committee*

*The New York Academy of Sciences;*

*Departments of Psychiatry and Pharmacology*

*New York University Medical Center*

*Abel Lajtha, Ph.D.*

*Conference Chair*

Each paper includes 20 minutes for presentation followed by 10 minutes for discussion.

**9:00 AM-10:30 AM**

**Session I**

**General Principles**

*Session Chair:*

*Abel Lajtha, Ph.D.*

*Conference Chair*

9:00 1. Gated-Ion Channels

**Leo Abood, Ph.D.**  
*Conference Chair*

9:30 2. Ligands, Receptor Models and Evolution

**Victor Cockcroft, Ph.D., ARCS**  
*Department of Molecular Modelling  
MRC Centre for Protein Engineering  
Cambridge, United Kingdom*

10:00 3. Molecular Organization-Efficacy,  
Agonists and Antagonists

**Victor J. Hruby, Ph.D.**  
*Department of Chemistry  
The University of Arizona  
Tucson, Arizona*

10:30 AM-11:00 AM Intermission

11:00 AM-12:30 PM Session II

### Nicotinic Receptor Structure and Function I

*Session Chair:*

**Jean-Charles Schwartz, Ph.D.**  
*Institut National de la Santé et  
de la Recherche Médicale  
Unité de Neurobiologie et Pharmacologie  
Centre Paul Broca de L'Inserm  
Paris, France*

11:00 4. CNS Nicotinic Receptors and Cholinergic  
Neurotransmission

**Paul B.S. Clarke, Ph.D.**  
*Department of Pharmacology and Therapeutics  
McGill University  
Montreal, Quebec, Canada*

11:30 5. Diversity of Primary Structure and Function of  
Neuronal AcCh Receptors

**Lorna W. Role, Ph.D.**  
*Center for Neurobiology and Behavior  
Columbia University  
College of Physicians & Surgeons  
New York, New York*



- 12:00 6. Correlation of Molecular Structure and Function

**Bianca M. Conti-Tronconi, M.D.**  
*Department of Biochemistry  
University of Minnesota  
St. Paul, Minnesota*

12:30 PM-2:00 PM      **Luncheon**  
*Regency C/D-Ballroom Level*

2:00 PM-4:00 PM      **Session III**

**Nicotinic Receptor Structure and Function II**

*Session Chair:*

**Bianca Conti-Tronconi, M.D.**  
*Department of Biochemistry  
University of Minnesota  
St. Paul, Minnesota*

- 2:00 7. Neurotoxins as Structural and Functional Probes of Nicotinic Receptors

**Edward Hawrot, Ph.D.**  
*Section of Molecular and Biochemical Pharmacology  
Brown University  
Providence, Rhode Island*

- 2:30 8. Molecular and Functional Properties of the Neuronal Nicotinic Acetylcholine Receptor

**Edson X. Albuquerque, M.D., Ph.D.**  
*Department of Pharmacology and Experimental Therapeutics  
University of Maryland School of Medicine  
Baltimore, Maryland*

- 3:00 9. Heterogeneity of Presynaptic ACh Receptors

**E. Sylvester Vizi, M.D.**  
*Department of Pharmacology  
Institute of Experimental Medicine  
Budapest, Hungary*

- 3:30 10. Chemical Kinetic Measurements in the  $\mu$ s-ms  
Time Region of Diverse Neurotransmitter  
Receptors

**George P. Hess, Ph.D.**  
*Department of Biochemistry, Molecular and  
Cell Biology  
Cornell University  
Ithaca, New York*

**4:00 PM-4:30 PM          Intermission**

**4:30 PM-6:00 PM          Session IV**

**Cholinergic Pathways and Receptor Regulation**

*Session Chair:*

**E. Sylvester Vizi, M.D.**  
*Department of Pharmacology  
Institute of Experimental Medicine  
Budapest, Hungary*

- 4:30 11. Human Brain Cholinergic Pathways

**M-Marsel Mesulam, M.D.**  
*Department of Neurology  
Harvard Medical School;  
Division of Neuroscience and Behavioral Neurology  
Beth Israel Hospital  
Boston, Massachusetts*

- 5:00 12. Regulation of Muscarinic Acetylcholine  
Expression and Function

**Neil M. Nathanson, Ph.D.**  
*Department of Pharmacology  
University of Washington  
Seattle, Washington*

- 5:30 13. Diversity and Patterns of Regulation  
of Nicotinic Receptor Subtypes

**Ronald J. Lukas, Ph.D.**  
*Division of Neurobiology  
Barrow Neurological Institute  
Phoenix, Arizona*

**6:00 PM-7:30 PM          Poster Session/Cash Bar**

*Poster Presenters will be available for  
discussion of posters at this time.*

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**Friday**  
**May 27, 1994**

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**8:00 AM-6:00 PM**

**Registration**

*Regency Foyer-Ballroom Level*

Each paper includes 20 minutes for presentation followed by 10 minutes for discussion.

**8:30 AM-10:30 AM**

**Session V**

**Nicotinic Receptors and Interactions with other  
Receptor Pathways**

*Session Chair:*

**Leo Abood, Ph.D.**

*Conference Chair*

8:30 14. nACh Receptor Subtypes

**Jon M. Lindstrom, Ph.D.**

*Department of Neuroscience*

*University of Pennsylvania*

*Medical Center*

*Philadelphia, Pennsylvania*

9:00 15. Nicotinic Amino Acidergic Interactions

**Abel Lajtha, Ph.D.**

*Conference Chair*

9:30 16. Phosphorylation of the Nicotinic Acetylcholine  
Receptor by Protein Tyrosine Kinase

**Sheridan L. Swope, Ph.D.**

*Department of Neuroscience*

*The Johns Hopkins University*

*School of Medicine*

*Baltimore, Maryland*

10:00 17. Cholinergic Receptor Regulation of  
Mesotelencephalic Dopamine Neurons

**Hans C. Fibiger, Ph.D.**

*Department of Neurological Sciences*

*University of British Columbia*

*Vancouver, B.C., Canada*

**10:30 AM-11:00 AM**

**Intermission**

**11:00 AM-12:00 Noon Session VI**

**Aminergic Receptor Heterogeneity**

*Session Chair:*

**Carl W. Cotman, Ph.D.**  
*Department of Psychobiology  
University of California, Irvine  
Irvine, California*

- 11:00 18.  $\beta$ -Adrenergic Subtypes: The Biotechnology of G-Protein Coupled Receptors

**Arthur D. Strosberg, Ph.D.**  
*Institut Cochin De Genetique Moleculaire  
CNRS UPR-0415, L'Inserm  
Immuno-Pharmacologie Moleculaire  
Paris, France*

- 11:30 19. Molecular and Functional Heterogeneity of Receptors for Serotonin

**Mark Voigt, Ph.D.**  
*Department of Pharmacology  
University College Dublin  
Dublin, Ireland*

**12:00 Noon-1:30 PM Luncheon**

*Regency C/D-Ballroom Level*

**1:30 PM-3:00 PM Session VII**

**Aminergic Receptor Interactions**

*Session Chair:*

**Arthur D. Strosberg, Ph.D.**  
*Institut Cochin De Genetique Moleculaire  
CNRS UPR-0415, L'Inserm  
Immuno-Pharmacologie Moleculaire  
Paris, France*

- 1:30 20. Interactions of Neurotensin with Central Dopamine Neurons: Neurochemical and Electrophysiological Evidence

**Charles B. Nemeroff, M.D., Ph.D.**  
*Department of Psychiatry and Behavioral Sciences  
Emory University School of Medicine  
Atlanta, Georgia*

- 2:00 21. Denervation, Hyperinnervation and Interactive Regulation of Dopamine and Serotonin Receptors

**Tomás A. Reader, M.D., Ph.D.**  
*Université de Montreal  
Faculté de Médecine  
Montreal, Quebec, Canada*

- 2:30 22. Molecular and Functional Diversity of Histamine Receptor Subtypes

**Jean-Charles Schwartz, Ph.D.**  
*Institut National de la Santé et  
de la Recherche Médicale  
Unité de Neurobiologie et Pharmacologie  
Centre Paul Broca de L'Inserm  
Paris, France*

**3:00 PM-3:30 PM          Intermission**

**3:30 PM-6:00 PM          Session VIII**

**Receptor Interactions of Therapeutic Interest**

*Session Chair:*

**Stephen R. Zukin, M.D.**  
*Departments of Psychiatry and Neuroscience  
Albert Einstein College of Medicine of  
Yeshiva University  
Bronx, New York*

- 3:30 23. Polyamines as Endogenous Modulators of NMDA Receptor and other Ligand-Gated Ion Channels

**Edythe D. London, Ph.D.**  
*Addiction Research Center  
National Institute on Drug Abuse  
National Institutes of Health  
Baltimore, Maryland*

- 4:00 24. Novel Dopamine Receptor Subtypes as Targets for Antipsychotics

**Pierre Sokoloff, Ph.D.**  
*Institut National de la Santé et  
de la Recherche Médicale  
Unité de Neurobiologie et Pharmacologie  
Centre Paul Broca de L'Inserm  
Paris, France*

4:30 25. Multiple Receptors of Substance P

*Susan E. Leeman, Ph.D.*  
Department of Pharmacology  
Boston University School of Medicine  
Boston, Massachusetts

5:00 26. Receptor-Receptor Interactions and their  
Relevance for Receptor Diversity:  
Focus on Neuropeptide-Dopamine Interactions

*Kjell Fuxe, M.D., Ph.D.*  
Department of Histology and Neurobiology  
Karolinska Institutet  
Stockholm, Sweden

5:30 27. Peptide Receptor Changes After Chronic  
Exposure to Agonists

*James E. Zadina, Ph.D.*  
Research Department  
Department of Veterans Affairs Medical Center  
New Orleans, Louisiana

6:00 PM-7:00 PM

**Poster Session/Cash Bar**

*Poster Presenters will be available for  
discussion of posters at this time.*

7:00 PM-9:30 PM

**Subscription Banquet  
@\$65 per person**

*Yorktown-Ballroom Level*

Refer to the Conference Registration  
Form in the back of the program for  
payment details.

**Banquet Speaker**

*Solomon H. Snyder, M.D.*  
Department of Neuroscience  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

*"Receptors and Transmitters: Perspective of an Old Warrior"*

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**Saturday**  
**May 28, 1994**

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**8:00 AM-6:00 PM**

**Registration**

*Regency Foyer-Ballroom Level*

Each paper includes 20 minutes for presentation followed by 10 minutes for discussion.

**8:30 AM-10:30 AM**

**Session IX**

**Opioid and Melanocortin Receptors**

*Session Chair:*

**Victor J. Hruby, Ph.D.**  
*Department of Chemistry  
The University of Arizona  
Tucson, Arizona*

8:30 28. Distribution of Neuropeptide Receptors

**Tomas Hökfelt, M.D.**  
*Department of Histology and Neurobiology  
Karolinska Institute  
Stockholm, Sweden*

9:00 29. Characterization of Opioid Receptor Types and Subtypes with New Ligands

**Anna Borsodi, Ph.D.**  
*Institute of Biochemistry  
Biological Research Center  
Hungarian Academy of Sciences  
Szeged, Hungary*

9:30 30. Opioid Receptor Subtypes and Addiction

**Gavril W. Pasternak, M.D., Ph.D.**  
*Department of Neurology  
Memorial Sloan-Kettering Cancer Center  
New York, New York*

10:00 31. Molecular Genetics of the Melanocortin Receptors

**Roger D. Cone, Ph.D.**  
*Vollum Institute  
Oregon Health Sciences University  
Portland, Oregon*

**10:30 AM-10:50 AM**

**Intermission**

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**10:50 AM-12:30 PM      Session X**

**Excitatory Amino Acid Receptors I**

*Session Chair:*

**Eric A. Barnard, Ph.D., FRS**  
*Molecular Neurobiology Unit  
Division of Basic Medical Sciences  
Royal Free Hospital School of Medicine  
London, United Kingdom*

10:50 32. EAA Receptor Functions in Health and in  
Neurological Diseases

**Brian S. Meldrum, Ph.D.**  
*Department of Neurology  
Institute of Psychiatry  
University of London  
London, United Kingdom*

11:20 33. Glutamate Receptors Modulation of  
Neurotransmitter Release

**Arsélio P. Carvalho, Ph.D.**  
*Department of Zoology  
Neurosciences Center  
University of Coimbra  
Coimbra, Portugal*

11:50 34. The Role of Glutamate and Glutamate  
Receptors in Memory Function and  
Alzheimer's Disease

**Frode Fonnum, D.Phil.**  
*Division for Environmental Toxicology  
Norwegian Defence Research Establishment  
Kjeller, Norway*

**12:20 PM-1:30 PM      Lunch Break**  
*Lunch on Own*



1:30 PM-3:30 PM

Session XI

**Excitatory Amino Acid Receptors II**

*Session Chair:*

**Brian S. Meldrum, Ph.D.**

*Department of Neurology*

*Institute of Psychiatry*

*University of London*

*London, United Kingdom*

- 1:30 35. Roles of Metabotropic Receptors in Brain Plasticity

**Carl W. Cotman, Ph.D.**

*Department of Psychobiology*

*University of California, Irvine*

*Irvine, California*

- 2:00 36. EAA Receptor Function and Regulation in Psychiatric Diseases

**Stephen R. Zukin, M.D.**

*Departments of Psychiatry and Neuroscience*

*Albert Einstein College of Medicine of*

*Yeshiva University*

*Bronx, New York*

- 2:30 37. EAA Metabotropic Receptor Subtypes and Calcium Regulation

**Max Récasens, Ph.D.**

*INSERM U 254*

*Hopital St. Charles*

*Montpellier, France*

- 3:00 38. Subtypes of EAA Receptors and Their Interactions

**Maurizio Raiteri, Ph.D.**

*Istituto di Farmacologia e Farmacognosia*

*Genova, Italy*

3:30 PM-4:00 PM

Intermission

4:00 PM-6:00 PM

Session XII

**GABA Receptors**

*Session Chair:*

**Frode Fonnum, D.Phil.**

*Division for Environmental Toxicology  
Norwegian Defence Research Establishment  
Kjeller, Norway*

- 4:00 39. Structure/Function Relationships in the Multiple GABA<sub>A</sub> Receptors

**Eric A. Barnard, Ph.D., FRS**

*Molecular Neurobiology Unit  
Division of Basic Medical Sciences  
Royal Free Hospital School of Medicine  
London, United Kingdom*

- 4:30 40. Structure and Distribution of the Multiple GABA<sub>A</sub> Receptor Subunits

**William Wisden, Ph.D.**

*Department of Neurobiology, LMB  
MRC Center  
Cambridge, United Kingdom*

- 5:00 41. Structure and Function of GABA<sub>B</sub> Receptors

**Kinya Kuriyama, M.D., Ph.D.**

*Department of Pharmacology  
Kyoto Prefectural University of Medicine  
Kyoto, Japan*

- 5:30 42. Partial Allosteric Modulators of GABA Action at GABA<sub>A</sub> Receptors

**Alessandro Guidotti, M.D.**

*Fidia-Georgetown-Institute for the Neurosciences  
Georgetown University  
Washington, D.C.*

**Adjournment**

## SPEAKERS

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Albuquerque, E.X., 8  
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Carvalho, A.P., 33  
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## SESSION CHAIRS

Session I— Lajtha, A.  
Session II— Schwartz, J-C.  
Session III— Conti-Tronconi, B.  
Session IV— Vizi, E.S.  
Session V— Abood, L.  
Session VI— Cotman, C.W.  
Session VII— Strosberg, A.D.  
Session VIII— Zukin, S.R.  
Session IX— Hruby, V.J.  
Session X— Barnard, E.A.  
Session XI— Meldrum, B.S.  
Session XII— Fonnum, F.

NOTES

### REGISTRATION FEE INCLUDES

- Entrance to Scientific Sessions
- Entrance to Poster Sessions
- Conference Materials
- Continuing Medical Education Credits
- Welcome Wine and Cheese Reception (May 25)
- Conference Luncheons (May 26 and 27)\*
- Coffee/Tea (During scheduled intermissions)

**\*Please Note:** Resident/Fellow, Student and Emeritus Member Registration Fees **do not** include the luncheons. If you register under any of these categories and wish to attend the luncheons, please indicate that by registering for the luncheons separately on the conference registration form.

### SUBSCRIPTION BANQUET

A separate subscription fee of \$65 is required for the Friday, May 27 Banquet. For payment details, please refer to the Conference Registration Form, which follows. **Payment is required prior to the meeting, by Monday, May 9.**

### CONFERENCE REGISTRATION REFUNDS

Written requests for refunds postmarked by **April 22, 1994** will be issued minus an administrative fee of \$25. Absolutely no refunds will be honored after this date.

### SUBSCRIPTION BANQUET REFUNDS

Written requests for refunds postmarked by **May 9, 1994** will be issued in full. Absolutely no refunds will be honored after this date.

### REGISTRATION HOURS

The conference registration desk will be open on Wednesday, May 25 from 6:30 PM to 8:30 PM in the Regency Ballroom Foyer on the Ballroom Level. Please check in at this desk to pick up your registration materials. The conference registration desk will re-open on Thursday, May 26 at 7:30 AM and will remain open for the duration of the Conference.

### MEMBERSHIP IN THE NEW YORK ACADEMY OF SCIENCES

As a participant in this conference, you will be offered the opportunity to become a member of The New York Academy of Sciences. The Academy links nearly 40,000 scientists and others across the United States and in 137 countries worldwide, representing all fields of science, engineering and medicine. The Academy aims to advance science and science education, the dissemination of scientific information, the human rights of scientists, the understanding and discussion of issues in science and technology policy, and the opportunities for women and minority groups in science.

Academy members enjoy a number of direct benefits, including:

- Reduced registration fees for about twenty major Academy conferences each year.
- One free volume of the *Annals of The New York Academy of Sciences* each year, and additional volumes at nominal prices.
- A subscription to the Academy's award-winning bimonthly magazine, *The Sciences*.
- The opportunity to participate in the activities of any and all of the Academy's twenty-five scientific sections.

For further information about Academy membership, please inquire at the conference registration desk or call (212) 838-0230, extension 346 or (800) 843-6927, extension 346.

## CONFERENCE REGISTRATION FORM

Functional Diversity of Interacting Receptors  
May 25-28, 1994

Return this form with your full payment to:

The Conference Department  
The New York Academy of Sciences  
2 East 63rd Street  
New York, New York 10021  
Telephone (212) 838-0230 x 324 Fax (212) 838-5640

Please type or print (legibly) all information.

First Name		Last Name	
Degree(s)			
Affiliation			
Mailing Address			
City	State	Country	Zip
Telephone Number		Fax Number	

**CONFERENCE REGISTRATION FEES**—Check (✓) correct category and fee. Conference Registration is waived for **Speakers and Session Chairs only**. Poster Presenters pay full registration fees.

Conference Registration Postmarked:	Before 4/22	After 4/22	Enclosed
— NYAS Member Membership No. _____	\$320	\$345	\$ _____
— Nonmember	\$415	\$440	\$ _____
— Resident/Fellow*	\$215	\$215	\$ _____
— Student or Emeritus Member*	\$150	\$150	\$ _____
— Daily Registration Date(s) _____	\$150	\$150	\$ _____
— Lunch May 26*	\$ 35	\$ 35	\$ _____
— Lunch May 27*	\$ 32	\$ 32	\$ _____
— Subscription Banquet 5/27†	\$ 65	\$ 65	\$ _____
<b>TOTAL FEE ENCLOSED</b>			<b>\$ _____</b>

\*You need to register for the May 26 and 27 luncheons **only** if you are paying the Resident/Fellow, Student or Emeritus Member Fees.

†The Friday, May 27 Banquet is by separate subscription. If you wish to attend the banquet, please enclose the fee with your conference registration. Payment is required prior to the meeting by Monday, May 9.

FDN

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**ADDITIONAL REGISTRATION INFORMATION:**

Students must have their department chair sign this form to qualify for the student registration fee.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Department and Title

**REGISTRATION REFUNDS**

Written requests for refunds postmarked by **April 22, 1994** will be issued minus an administrative fee of \$25.00. Absolutely no refunds will be honored after this date.

**SUBSCRIPTION BANQUET REFUNDS**

Written requests for refunds postmarked by **May 9, 1994** will be issued in full. Absolutely no refunds will be honored after this date.

**METHOD OF PAYMENT:**

**U.S. Bank Check or International Money Order** made payable to:  
The New York Academy of Sciences

Amount Enclosed \$ \_\_\_\_\_

or

**Credit Card** (Please complete all information)

☐ MasterCard

☐ VISA

☐ American Express

\_\_\_\_\_  
Card Number

\_\_\_\_\_  
Expiration Date

\_\_\_\_\_  
Name of Cardholder (Please Print)

\_\_\_\_\_  
Cardholder Signature

**How did you learn of this meeting?**

☐ NYAS Conference Schedule

☐ Conference Flyer

☐ From a Colleague

☐ Advertisement in (please specify) \_\_\_\_\_

☐ Other (please specify) \_\_\_\_\_



## HOTEL RESERVATION FORM

Reservations must be received by April 22, 1994.

### Mail directly to:

Reservations Manager  
Hyatt Regency Washington on Capitol Hill  
400 New Jersey Avenue, NW  
Washington, D.C. 20001  
Telephone (202) 737-1234 (800) 233-1234  
Hotel Fax (202) 737-5773

## THE NEW YORK ACADEMY OF SCIENCES

### Functional Diversity of Interacting Receptors

May 25-28, 1994

Please type or print (legibly) all information.

First Name		Last Name	
Sharing With (Provide Name)			
Mailing Address			
City	State	Country	Zip Code
Telephone Number		Fax Number	

Special group rates are available for the nights of May 25, 26, and 27.  
A limited number of rooms are available on a first reserved basis at the  
group rate for the night of May 28.

Please send only 1 form per room.

Arrival Date \_\_\_\_\_ Departure Date \_\_\_\_\_

Number of people in the room \_\_\_\_\_

Request separate room bills? \_\_\_\_\_ Yes \_\_\_\_\_ No

\$120 \_\_\_\_\_ Single (1 person)

\$120 \_\_\_\_\_ Double (2 persons/1 bed)

\$120 \_\_\_\_\_ Double/Double (2 persons/2 beds)

\$ 25 \_\_\_\_\_ Per Extra Person in Room

Rates are subject to the prevailing city and local occupancy taxes  
currently at 11% and \$1.50 per room per night occupancy tax.

-over-

Complete the following if applicable:

Confirmation Requested \_\_\_\_\_

**CHECK-IN TIME: 3:00 PM**

**CHECK-OUT TIME: 12:00 Noon**

RESERVATIONS RECEIVED AFTER APRIL 22, 1994 WILL BE  
ACCEPTED ON A SPACE AVAILABLE BASIS AND MAY BE  
SUBJECT TO A HIGHER RATE.

Reservations will be held until 4:00 PM unless accompanied by a  
deposit or an accepted credit card number and signature.

Please hold my reservation for:

\_\_\_\_\_ 4:00 PM arrival.

\_\_\_\_\_ Late arrival guaranteed by first night's deposit plus state and  
local occupancy taxes (11% + \$1.50).  
Amount enclosed \$\_\_\_\_\_.

\_\_\_\_\_ Late arrival guaranteed by first night's deposit plus state and  
local occupancy taxes (11% + \$1.50) on my credit card  
(American Express, Diner's Club, VISA, MasterCard,  
Discover Card or Carte Blanche).

\_\_\_\_\_  
**Credit Card Name**

\_\_\_\_\_  
**Credit Card Number**

\_\_\_\_\_  
**Expiration Date**

\_\_\_\_\_  
**Name of Cardholder (please print)**

\_\_\_\_\_  
**Cardholder Signature**

#### **GUARANTEED RESERVATIONS**

I understand that I am liable for one night's room and tax, which will  
be deducted from my deposit or billed through my credit card in the  
event that I do not arrive by 4:00 PM on the arrival date indicated.

\_\_\_\_\_  
**Signature**

## TENTATIVE CONFERENCE SCHEDULE

If you would like information about any of the conferences below, please circle the names of the conferences and return this page to The New York Academy of Sciences with your name and address on the reverse side. Program and registration information will be mailed approximately three months before each conference. You need not register for the conference to request information.

### **BRAIN CORTICOSTEROID RECEPTORS: STUDIES ON MECHANISM, FUNCTION AND NEUROTOXICITY OF CORTICOSTEROID ACTION**

MARCH 2-5, 1994, CRYSTAL GATEWAY MARRIOTT, ARLINGTON, VIRGINIA

Chairs: E.R. de Kloet, Leiden Amsterdam Center for Drug Research, The Netherlands; Efrain C. Azmitia, New York University; Philip W. Landfield, University of Kentucky

### **T-CELL RECEPTOR USE IN HUMAN AUTOIMMUNE DISEASES**

APRIL 18-21, 1994, DOUBLETREE HOTEL AT HORTON-PLAZA, SAN DIEGO, CALIFORNIA

Chairs: Joel Buxbaum, New York University School of Medicine; Mark M. Davis, Howard Hughes Medical Institute, Stanford University

### **THE POST-POLIO SYNDROME: ADVANCES IN THE PATHOGENESIS AND TREATMENT**

APRIL 27-30, 1994, HYATT REGENCY BETHESDA, BETHESDA, MARYLAND

Chairs: Marinos C. Dalakas, The National Institutes of Neurological Disorders and Stroke-NIH; Harry Bartfeld, St. Vincent's Hospital and Medical Center; Leonard T. Kurland, Mayo Clinic, Mayo Medical School

### **INTERLEUKIN-6-TYPE CYTOKINES**

JUNE 19-22, 1994, SCIENCE CENTER, THE POLISH ACADEMY OF SCIENCES, POZNAN, POLAND

Chairs: Andrzej Mackiewicz, Great Poland Cancer Center, Poland; Alex Koj, Jagiellonian University, Poland; Pravan Sehgal, New York Medical College

### **FUNDAMENTAL PROBLEMS OF QUANTUM THEORY**

JUNE 19-22, 1994, UNIVERSITY OF MARYLAND BALTIMORE COUNTY, BALTIMORE, MARYLAND

Chair: Daniel Greenberger, City College of CUNY

### **IMMUNOGLOBULIN GENE EXPRESSION IN DEVELOPMENT AND DISEASE**

JULY 13-17, 1994, THE FOUR SEASONS, MONTREAL, CANADA

Chairs: Paolo Casali and Leslie Silberstein